Date: Sat, 20 Mar 93 04:30:02 PST
From: Packet-Radio Mailing List and Newsgroup <packet-radio@ucsd.edu>
Errors-To: Packet-Radio-Errors@UCSD.Edu
Reply-To: Packet-Radio@UCSD.Edu
Precedence: Bulk
Subject: Packet-Radio Digest V93 #73
To: packet-radio

Packet-Radio Digest Sat, 20 Mar 93 Volume 93 : Issue 73

Today's Topics:
correction to Macintosh Amateur Radio Software March 1993 lis
Help with AEA-232 com port config
INFO: TAPR state machine revealed (a little)
Mod for IC-27A and 9600 B
Packet Radio via CB????

Send Replies or notes for publication to: <Packet-Radio@UCSD.Edu>
Send subscription requests to: <Packet-Radio-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Packet-Radio Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/packet-radio".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: 19 Mar 93 17:09:46 GMT
From: news-mail-gateway@ucsd.edu
Subject: correction to Macintosh Amateur Radio Software March 1993 lis
To: packet-radio@ucsd.edu

OK... fellow Mac users... I blew a line or two in the March 1993 release of Mac Amateur Radio software list. Please cut the below and paste the appropriate lines into the the list.

> left out the name of the apllication! <

--Packet and other digital modes--
NET/Mac
Allows simultaneous TCP/IP, AX.25, and NET/ROM connections. Requires a TNC with KISS mode. Copyright, but free for noncommercial use.
Available via anonymous FTP from ftp.apple.com (/pub/ham-radio); and on the Digikron Systems, WB3FFV, and N8EMR dialup BBSs. Or send a formatted 800K Macintosh disk with stamped, self-addressed disk mailer to Doug Thom, N6OYU,

1405 Graywood Drive, San Jose, CA 95129.
Adam van Gaalen, PA2AGA, (Internet: adam@IGG.TNO.NL) has been making modifications to NET/Mac. His version is available via anonymous FTP from ucsd.edu (/hamradio/packet/tcpip/pa2aga).

> spelled Patty's name wrong twice and add a "disclaimer" <

NOTE: Much of this work was done by Patty-N6BIS as she collected information from many vendors. I would like to keep this list as up to date as possible. Please feel free to drop me a note if you have any additional software to this list.

DISCLAIMER: The software listed here is not endorsed by Apple Computer, Inc.(c) nor has it been tested by the authors of this list.

```
***************************************************************
* Recompiled by Terry Stader - KA8SCP  (tstader@aol.com)      *
* Original list compiled by Patty Winter - N6BIS              *
* New information last added 3/93                             *
* some information not rechecked since early 1991.            *
***************************************************************
```

73 for now.... c u on the shortwaves
Terry Stader - KA8SCP
America Online Ham Radio Club Host
Internet: tstader@aol.com (files <28K) or
          tstader@attmail.com (files >28K)
KA8SCP@WA1PHY.#EMA.MA.USA.NOAM
ka8scp@ka8scp.ampr.org [44.56.4.82] Mac
ka8scp-1@ka8scp-1.ampr.org [44.56.4.120] DOS Clone
(they're BOTH pc's!)

Date: Fri, 19 Mar 1993 12:31:17 GMT
From: newsflash.concordia.ca!nstn.ns.ca!news.ucs.mun.ca!csd.unb.ca!UPEI.CA!seeler@uunet.uu.net
Subject: Help with AEA-232 com port config
To: packet-radio@ucsd.edu

In article <1obe9qINNcdm@usenet.INS.CWRU.Edu> cxl24@po.CWRU.Edu (Charles Lind) writes:
>From: cxl24@po.CWRU.Edu (Charles Lind)
>Subject: Help with AEA-232 com port config
>Date: 19 Mar 1993 03:22:33 GMT
>
>
>Just recently bought an Advanced Electronic Applications Model PK-232MBX

>TNC. Does anyone have any idea about configuring it? What com port is
>it set to? I am assuming com1: but it will not respond. This may be
>due to the interface card in the computer. Any input would be
>appreciated.
>
>   Thanks in advance, C. Lind
>

Check the first few pages of the manual. It will tell you what parameters that the TNC is set to before being shipped from the company. Make sure that you have in fact connected the TNC using the shielded cable to the COM1 port of your computer and not COM2. This may be a factor if your computer has a moden and a serial port OR two serial ports. Using the software package make sure that the appropriate COM port is configured to the TNC initial parameters (as described in the manual). I'm not at home so I can not give them to you - but if you have further questions send EMail to SEELER@UPEI.CAnot the list and I will be able to help over the weekend.

73 Dave, VY2DCS
Seeler@UPEI.CA

Date: Fri, 19 Mar 93 16:15:02 GMT
From: netcomsv!orchard.la.locus.com!prodnet.la.locus.com!atlas.la.locus.com!dana@decwrl.dec.com
Subject: INFO: TAPR state machine revealed (a little)
To: packet-radio@ucsd.edu

I spent some time looking at the TAPR State Machine 1.0.9 and 2.0.0 ROMs. I wrote a short program which allows one to simulate State Machine operation, including both a 1.0.9 image and 2.0 image.

I was interested in particular in the rumor that the 2.0 ROM is more likely to false in the presence of noise.

I determined that both versions will output an active DCD state if the data input has no transitions. This confirms my earlier suspicion which I had posted here on rec.radio.amateur.packet and been told I was wrong :-). Further, the TAPR 9600 baud modem manual explains that the state machine does not look for transitions in the right place, instead it looks for transitions in the wrong place. A steady data input will be free of transitions, which includes the wrong place, too. So there.

I wrote a short program which generates a pseudo-random sequence of data input for the DCD program. Using the test data generated, I discovered the 2.0 state machine is *less likely* to false than the 1.0.9 machine. If, as is rumored, the TAPR 9600 baud modem is subject to a lot of falsing, it is not because the State Machine is more sensitive; it would be because the external timing network in the 9600 baud modem does not have long enough timeouts; I'll look into this later.

For giggles, here's a cheesy simulation program. No comments on style, please! :-)

```
---------------------------------------
/*
 * DCD simulator
 * Dana H. Myers, KK6JQ
 * State Machine Images (C) Tucson Amateur Packet Radio, Inc.
 *
 * Input data is a series of one and zeroes, clocked at the State Machine
 * clock rate.
 */


/* DCD table */

int dcd_tab_109[] = {
0x81,0x82,0x83,0x84,0x85,0x86,0x87,0x88,0xD9,0x8A,0x8B,0x8C,0x8D,0x8E,0x8F,0x80,
0x91,0x92,0x93,0x94,0x95,0x96,0x97,0x98,0xC9,0x9A,0x9B,0x9C,0x9D,0x9E,0x9F,0x90,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0xC1,0xC2,0xC3,0xC4,0xC5,0xC6,0xC7,0xC8,0xC9,0xCA,0xCB,0xCC,0xCD,0xCE,0xCF,0xC0,
0x91,0x91,0x92,0x93,0x94,0x95,0x16,0x17,0x1A,0x1B,0x9C,0x9D,0x9E,0x9F,0x90,0x90,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x81,0x82,0x83,0x84,0x85,0x86,0x87,0x88,0xD9,0x8A,0x8B,0x8C,0x8D,0x8E,0x8F,0x80,
0x91,0x92,0x93,0x94,0x95,0x96,0x97,0x98,0xC9,0x9A,0x9B,0x9C,0x9D,0x9E,0x9F,0x90,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x81,0x81,0x82,0x83,0x84,0x85,0x06,0x07,0x0A,0x0B,0x8C,0x8D,0x8E,0x8F,0x80,0x80,
0xD1,0xD2,0xD3,0xD4,0xD5,0xD6,0xD7,0xD8,0xD9,0xDA,0xDB,0xDC,0xDD,0xDE,0xDF,0xD0,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00
};

int dcd_tab_200[] = {
0x01,0x02,0x03,0x04,0x05,0x06,0x07,0x08,0x59,0x0A,0x0B,0x0C,0x0D,0x0E,0x0F,0x00,
0x91,0x92,0x93,0x94,0x95,0x96,0x97,0x98,0x99,0xCA,0x9B,0x9C,0x9D,0x9E,0x9F,0x90,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0xC1,0xC2,0xC3,0xC4,0xC5,0xC6,0xC7,0xC8,0xC9,0xCA,0xCB,0xCC,0xCD,0xCE,0xCF,0xC0,
0x92,0x92,0x92,0x93,0x94,0x95,0x96,0x17,0x18,0x19,0x1C,0x1D,0x9E,0x9F,0x90,0x91,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x01,0x02,0x03,0x04,0x05,0x06,0x07,0x08,0x49,0x0A,0x0B,0x0C,0x0D,0x0E,0x0F,0x00,
0x91,0x92,0x93,0x94,0x95,0x96,0x97,0x98,0x99,0xDA,0x9B,0x9C,0x9D,0x9E,0x9F,0x90,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x92,0x92,0x92,0x93,0x94,0x95,0x96,0x17,0x18,0x19,0x1C,0x1D,0x9E,0x9F,0x90,0x91,
0xD1,0xD2,0xD3,0xD4,0xD5,0xD6,0xD7,0xD8,0xD9,0xDA,0xDB,0xDC,0xDD,0xDE,0xDF,0xD0,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00
};

#define   dcd_tab   dcd_tab_109
#define   Clk_Out(x)     (((x)&0x08)!=0)
#define   Phase_Out(x)   (((x)&0x80)!=0)

main()
{
     int  addr = 0;
     int  data, j;
     int  min_phase = 0;
     int  max_phase = 0;
     int  current_phase = 0;
     int  total_phase = 0;


     while (scanf("%d", &data) == 1) {
          if (data)
               addr |= 0x80;
          else
               addr &= 0x7f;

          j = dcd_tab[addr];
#if 0
          printf("%d: %d %d\n",
               data, Phase_Out(j), Clock_Out(j));
#endif
          current_phase++;
          if (!(j & 0x80)) {
               if (min_phase == 0)
                    min_phase = 1000000;
               total_phase++;
               if (current_phase > max_phase)
                    max_phase = current_phase;
               if (current_phase < min_phase)
                    min_phase = current_phase;

               current_phase = 0;
          }
          addr = j;
     }
     if (current_phase > max_phase)
          max_phase = current_phase;

     printf("Min: %d, Max %d, Total %d\n",
               min_phase, max_phase, total_phase);
}
```

--
 * Dana H. Myers KK6JQ | Views expressed here are *
 * (310) 337-5136 | mine and do not necessarily   *
 * dana@locus.com DoD #466 | reflect those of my employer
     *
 * This Extra supports the abolition of the 13 and 20 WPM tests *

Date: Fri, 19 Mar 1993 19:32:22 GMT
From: pipex!bnr.co.uk!corpgate!brtph560!brtph87!tcain@uunet.uu.net
Subject: Mod for IC-27A and 9600 B
To: packet-radio@ucsd.edu

In article <1993Mar15.153448.13977@ninja.zso.dec.com> mcleman@nthead.zso.dec.com (Jeff McLeman) writes:

>
>--
>Does anybody know what mod is need to use an Icom IC-27A for 9600 baud? Or is it not worth the effort?
>

I've hacked at it a bit. If you examine the schematic it seems fairly obvious. The receive connection is made at the discriminator ic (pin 9 i think). I've tried injecting the xmit to the varactor via 1 of the pins on the connector with the single jumper wire on it (white wire on mine). The problems I have run into is that xmit works fine, rcv works fine, BUT, they don't work together. As soon as I hook up the xmit side, the rcv sides goes deaf. Someday I'll work on it some more, but, go ahead and take a shot at it! I haven't blown up any of my radio's yet!

73,
Tom
--
Tom Cain WB8OUE   tcain@bnr.ca
disclaimer: i don't speak for nobody!

Date: Fri, 19 Mar 93 16:13:46 GMT
From: dog.ee.lbl.gov!hellgate.utah.edu!cs.utexas.edu!zaphod.mps.ohio-state.edu!caen!destroyer!cs.ubc.ca!unixg.ubc.ca!kakwa.ucs.ualberta.ca!ersys!adec23!mark@network.UCSD.EDU
Subject: Packet Radio via CB????

To: packet-radio@ucsd.edu

gary@ke4zv.uucp (Gary Coffman) writes:

>An ordinary TNC should work nicely. Even the little Baycom type units
>will work at 1200 baud.

C'mon Gary, have you tried it on AM? You have to be prepared to watch the paint dry even on SSB on HF at 300/1200 or 9600 because it is darn hard to get a reliable packet through!

Try the 65cm FM CB band, or even the 49MHz or 900MHz FM toy band, you will have far better luck getting through. The CBers will jam you at any possible chance if you go to 11M CB, irregardless if legal or not (it is NOT legal, since the ITU agreement on 11M prevents it ...)

>Gary Coffman KE4ZV
>Destructive Testing Systems

End of Packet-Radio Digest V93 #73
****